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FEDERAL-STATE COOPERATIVE
SNOW SURVEYS AND IRRIGATION WATER FORECASTS

for

MISSOURI and ARKANSAS DRAINAGE BASINS

APRIL 1, 1941

By

Division of Irrigation, Soil Conservation Service

United States Department of Agriculture

and

Colorado Agricultural Experiment Station

Division of Irrigation
Soil Conservation Service
U. S. Department of Agriculture
Washington, D. C.

Data included in this report were obtained by the agencies named above in cooperation with the U. S. Forest Service, National Park Service, State Engineers of Colorado, Wyoming and New Mexico and other Federal, State and local organizations.

SNOW SURVEYS AND IRRIGATION WATER FORECASTS
FOR MISSOURI AND ARKANSAS RIVERS
April 1, 1941

The following data pertaining to snow surveys and irrigation water-supply forecasts are provided by the Division of Irrigation, Soil Conservation Service, of the U. S. Department of Agriculture, in cooperation with State departments, other Federal bureaus and local organizations. The snow measurements are made principally by field personnel of the following organizations: Forest Service, National Park Service, Bureau of Reclamation, U. S. Geological Survey, War Department and State Experiment Stations. This work is otherwise conducted cooperatively with the State Engineer of Colorado, State Planning Board of Wyoming, and various municipalities, irrigation associations, power companies and others. Precipitation records are supplied by the U. S. Weather Bureau.

P R E C I P I T A T I O N D A T A

WATERSHED	STATE	Precipitation October 1 to March 31	Departure from Normal	Precipitation	Departure from Normal
		Inches	Inches	March Inches	Inches
Missouri	East. Mont.	3.44	-0.30	0.42	-0.38
Missouri	Cent. Mont.	3.32	-1.28	0.48	-0.38
Missouri	North. Wyo.	6.15	-1.41	1.47	-0.21
North Platte	Wyoming	4.84	-1.01	1.16	-0.03
South Platte	Colorado	5.78	-0.87	2.37	+0.68
Arkansas	Colorado	5.26	+0.41	2.32	+1.16

Precipitation on the watershed of the Missouri and its tributaries in Montana and the Yellowstone and North Platte in Wyoming was below normal during March. On the watershed of the South Platte and the Arkansas precipitation was above normal during March. The accumulated precipitation from October 1 to March 31 is less than normal on all the watersheds except the Arkansas for which the precipitation during this period was only slightly above normal.

SUMMARY OF APRIL 1 SNOW SURVEYS AND COMPARISON OF DATA

WITH THAT OF PREVIOUS YEARS BY WATERSHEDS

WATERSHEDS	Snow Depth		Water Content			Number courses in Average	Snow Density		1941 Water Content in Percent of	
	Six Year Avg.*	1940	1941	Six year Avg.*	1940		Six year Avg.*	1941	Six year Avg.*	1940
	In	In.	In.	In.	In.		Percent	Percent	Percent	Percent
MISSOURI RIVER										
Jefferson River	28.8	24.9	25.0	8.5	7.9	6.4	30	32	75	81
Madison River	47.5	41.2	37.2	16.8	14.2	12.2	35	34	73	86
Gallatin River	28.8	27.4	17.8	8.8	9.4	5.0	30	34	57	53
Missouri River**	25.8	23.4	16.3	7.1	6.4	4.2	27	27	59	66
Marias River	32.5	31.5	18.6	12.0	11.3	6.5	37	36	54	57
Yellowstone River	26.4	23.3	22.3	7.1	7.3	5.1	27	31	72	70
Shoshone River	51.6	39.4	47.0	15.1	12.1	12.4	29	31	82	102
Bighorn River	38.1	28.0	36.6	10.8	8.7	9.4	28	31	87	108
Tongue River	17.4	13.6	16.8	4.4	4.8	3.8	25	35	86	79
Powder River	23.2	14.8	23.2	4.8	3.3	4.4	21	22	92	133
North Platte River	55.0	43.9	43.9	18.7	16.0	13.9	34	36	74	87
Sweetwater River	37.1	30.9	40.5	9.3	7.7	9.1	25	25	98	118
Laramie River	36.5	28.8	28.4	11.3	9.9	8.5	31	34	75	86
South Platte River***	20.2	14.4	25.0	5.3	4.1	6.2	26	28	117	151
Crow Creek	13.2	11.9	10.8	4.1	3.5	3.0	31	29	73	86
Poudre River	37.6	32.1	29.1	11.7	10.9	8.6	31	34	73	79
Big Thompson River	63.5	56.7	49.9	20.7	19.4	14.0	33	34	68	72
St. Vrain River	43.9	31.7	30.2	12.8	9.6	7.6	29	30	59	79
Boulder Creek	32.9	25.0	30.0	10.6	9.4	8.6	32	38	81	92
Clear Creek	45.0	31.5	37.1	12.7	10.0	9.9	28	32	78	99
ARKANSAS RIVER	39.1	21.8	39.8	9.5	6.9	11.6	24	32	122	168

*Some for shorter periods.

**Headwaters of Missouri River

***Above Denver, Colo.

MONTANA

MISSOURI RIVER (Headwaters). The seven courses on this watershed had an average water content of 4.2 inches, April 1, and a year ago they had 6.4 inches. The six year average is 7.1 inches.

JEFFERSON RIVER. Seven courses on the watershed of the Jefferson River had an average water content of 6.4 inches, April 1, 7.9 inches a year ago and a six-year average of 8.5 inches.

MADISON RIVER. On the Madison River the water content of the snow, April 1 as shown by the readings on 8 courses was 12.2 inches; on this date last year it was 14.2 inches. The six year average is 16.8 inches.

GALLATIN RIVER. The average water content of the snow on 3 courses on this drainage was 5.0 inches, April 1, and 9.4 inches a year ago at this time. The six year average is 8.8 inches.

MARIAS RIVER. As shown by the readings on the two courses on the watershed of this stream, the water content of the snow averaged 6.5 inches, April 1, 1941, 11.3 inches April 1, 1940, and 12.0 inches for the six year period.

YELLOWSTONE RIVER. Twelve courses on the watershed of the Yellowstone in Montana and Wyoming had an average water content of 5.1 inches, April 1, 7.3 inches a year ago on this date and a six year average of 7.1 inches.

WYOMING

SHOSHONE RIVER. The average water content of the snow on this watershed, April 1, was 12.4 inches as shown by the measurements on 4 courses. A year ago it was 12.1 inches and the six year average for these courses is 15.1 inches.

BIGHORN RIVER. Seven courses on this drainage had an average water content of 9.4 inches, April 1, and 8.7 inches a year ago. The six year average is 10.8 inches.

TONGUE RIVER. Two courses on this stream had a water content of 3.8 inches, April 1, 4.8 inches a year ago and a six year average of 4.4 inches.

POWDER RIVER. Two courses on the Powder had a water content of 4.4 inches, April 1, 3.3 inches a year ago and a six year average of 4.8 inches.

NORTH PLATTE RIVER. Eleven courses on the headwaters of the North Platte had a water content of 13.9 inches on April 1, and 16.0 inches on that date last year. The six year average is 18.7 inches.

SWEETWATER RIVER. There is one course on this drainage. The April 1 reading was 9.1 inches of water and a year ago it was 7.7 inches. The 6 year average is 9.3 inches.

LARAMIE RIVER. The Laramie River has 9 courses on its headwaters. The average water content on these courses, April 1, was 8.5 inches compared with 9.9 inches a year ago and a six year average of 11.3 inches.

COLORADO

SOUTH PLATTE RIVER. Three courses on the headwaters of the Platte above Denver had a water content of 6.2 inches, April 1, 4.1 inches a year ago and a six year average of 5.3 inches.

CROW CREEK. On this stream the water content of the snow as shown by the observations on one course was 3.0 inches, April 1, 3.6 inches a year ago and 4.1 inches as the six year average.

POUDRE RIVER. The Poudre River watershed has 7 snow courses for which the average water content on April 1 was 8.6 inches. Last year it was 10.9 inches on these courses and the six year average is 11.7 inches.

BIG THOMPSON RIVER. There is only one course on this stream for which comparable records are available. On this course the water content on April 1 was 14.0 inches, in 1940 it was 19.4 inches and the six year average is 20.7 inches.

ST. VRAIN RIVER. For the St. Vrain River there are records from one course. On April 1 the water content of snow was 7.6 inches; a year ago it was 9.6 inches and the six year average is 12.8 inches.

BOULDER CREEK. Two courses on Boulder Creek had an average water content of 8.6 inches, April 1 and 9.4 inches on the same date last year. The six year average is 10.6 inches.

CLEAR CREEK. The one course on the watershed of this stream had a water content of 9.9 inches, April 1, 10.0 inches a year ago and 12.7 inches as the six year average.

ARKANSAS RIVER. There are 9 courses on the Arkansas River for which the average water content, April 1, was 11.6 inches. On this date last year it was only 6.9 inches. The six year average is 9.5 inches.

WATER SUPPLY OUTLOOK

MONTANA. The water supply outlook in Montana is unfavorable at this time and according to present indications runoff will be much below normal this summer. Winter precipitation was considerably below normal and snow cover on the headwaters of the principal streams is the least since 1934. On the headwaters of the Jefferson River the water content of the snow is 81 percent of what it was last year and 75 percent of the six year average. Similar conditions exist on the Madison River drainage. The water content of the snow on the watershed of the Gallatin River is only 53 percent of what it was last year and 57 percent of the six year average. On the snow courses on the headwaters of the Missouri River the water content of the snow is 66 percent of the amount there last year and 59 percent of the six year average. For the Marias River watershed the water content of the snow is 57 percent of last year and 54 percent of the six year average. Some melting of snow is occurring at elevations below 7000 feet, but stream flows are about normal. Soil moisture is deficient in eastern Montana and unless conditions improve there will be shortage of stock water in this area.

WYOMING. The snow cover generally over the northern part of the state, except the watershed of the Yellowstone, is equal to or better than it was last year while for the North Platte and Laramie drainages, in southern Wyoming, snow conditions average about 85 percent of last year and only 75 percent of the past six years. For the Shoshone, Big Horn, Tongue, Powder and Sweetwater, the run-off should be equal to or slightly better than for last year. The present snow conditions on the watersheds of these streams is only about 90 percent of the past six-year average. During the month of March the water content of the snow was increased two to four inches on the headwaters of these drainages. The outlook for the Yellowstone is poor with an increase of only one inch in the water content of the snow during March. For the North Platte, present indications are that the run-off this year will not exceed 50 percent of the April-July average for the past 5 years, and similarly the water supply for the Laramie will also be about one-half. During March the increase in the water content of the snow over the headwaters of the North Platte and Laramie was nearly 3 inches, which brought the average water content on the North Platte to about 14 inches as compared with 16 inches in 1940, 19 inches in 1939 and 22 inches in 1938. The present water content of the snow on the Laramie is $8\frac{1}{2}$ inches. On this same watershed it was 10 inches April 1, 1940, 11 inches 1939 and 12 inches in 1938. Since the first of the month run-off prospects have improved decidedly in the Platte and Laramie basins.

Reservoir storage in the North Platte is slightly more than it was a year ago. Storage in the Wheatland Reservoir, on the Laramie, is about 75 percent more than last year, while for Bull Lake and Pilot Butte, on the Wind River drainage, the present storage is only about one-half. Shoshone Reservoir has 21,700 acre feet. Soil moisture in the North Platte valley is now satisfactory, River-ton Project on the Wind River exceptionally good, and recent rain and snow over Laramie and Albany counties have improved moisture conditions in these areas. In Fremont and Natrona counties conditions are good. The northeastern part of state is fair to poor.

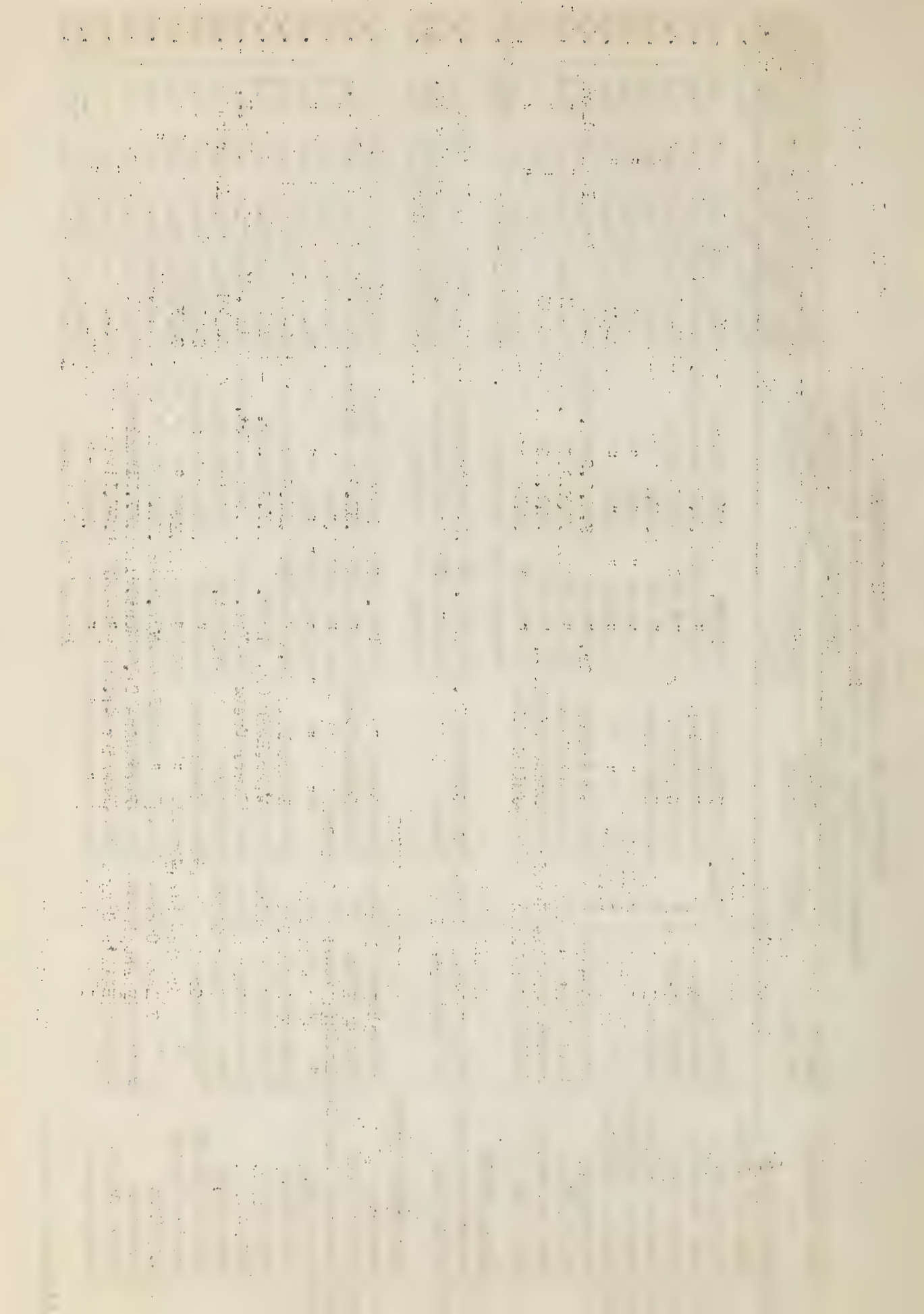
COLORADO. For the South Platte above Denver, the water content of the snow is 50 percent more than a year ago while for the several tributaries to this stream it is only about 80 percent. The present water content of the snow in comparison with the past six-year average is, Poudre 73 percent, Big Thompson 68, St. Vrain 59 and Boulder Creek 81 percent. Reservoir storage, South Platte valley and tributaries, is improved over that of last year at this time by about 25 percent. The soil moisture condition in this agricultural area is fair to good. The present outlook for irrigation supplies as based on snow storage is not good in this section of northern Colorado.

The outlook for the Arkansas Valley is substantially better than a year ago. The expected April-July run-off will be about 50 percent greater than for 1940 and approximately the average for the past six years. Storage in reservoirs in this part of the state is 40 percent less than last year. Soil moisture conditions are very good.

MISSOURI AND ARKANSAS RIVER WATERSHEDS
Summary of Federal and State Cooperative Snow Surveys
Issued April 10, 1941, at Fort Collins, Colorado

Main Drainage and Snow Course		Local Drainage		Location		Elev.	National Forest	Apr. 1 Snow Course Measurements			
No.		State	Locality	Description	Av. Snow Depth			Av. Water Content			
								1940	1941	1941	1941
								In.	In.	Avg.	In.
MISSOURI RIVER											
6	Chessman Res.	Mont.	11mi. SW. Helena	2-8N-5W	6200	Helena		14.1	8.2	3.2	1.9
11	Goat Mountain	"	26mi. W. Gilman	47.5N112.9W	7000	Lewis & Clark		18.9	18.4	11.0	4.6
36	Stemple Pass	"	Stemple Pass	16-13N-7W	6900	Helena		23.4	25.0	18.0	6.8
41	Tenmile Cr. Lower	"	17mi. SW. Helena	13-8N-6W	6250	"		18.5	13.7	9.0	3.7
42	Tenmile Cr. Middle	"	"	13-8N-6W	6800	"		31.8	27.5	18.0	7.2
43	Tenmile Cr. Upper	"	"	19-8N-5W	8000	"		37.5	34.3	24.0	10.2
	Grasshopper	"	6mi. S.W. S. Spgs.	19-9N-8E	7000	Lewis & Clark		17.1	--	15.0	4.4
	King's Hill	"	21mi. N.W. S. Spgs.	35-13N-7E	7950	"		36.2	36.8	31.0	10.3
	Orville Harris	"	12mi. E.W. S. Spgs.	31-10N-9E	6500	"		15.8	--	16.0	4.0
	Half Moon	"	19mi. S. Lewiston	22-12N-18E	6000	"		17.0	--	17.0	6.2
				Average for		Drainage		25.8	23.4	16.3	7.1
MARIAS RIVER											
7	Desert Mountain*	Mont.	4mi. S. Belton	24-31N-19W	5600	Flat Head		28.1	34.0	22.2	9.7
20	Marias Pass	"	Summit	48.3N113.4W	5250	Glacier NP.		36.9	29.0	15.0	14.4
				Average for		Drainage		32.5	31.5	18.6	12.0
YELLOWSTONE RIVER											
14	Dome Lake	Wyo.	Dome Lake	11-53N-87W	8800	Big Horn		20.6	19.0	22.2	5.6
40	Lupine Creek	"	11mi. SE. Gardiner	44.9N110.6W	7300	Yel. Nat. P.		27.9	21.4	23.8	7.7
41	Blacktail Deer Cr.	"	11mi. "	44.9N110.6W	7500	"		33.0	24.7	30.2	9.2
42	Beaver Dams	"	"	44.9N110.6W	7200	"		20.2	17.1	14.3	6.0
70	Lodge Pole	"	34mi. NW. Cody	32-56N-106W	8200	Shoshone		30.8	25.4	32.7	9.8
	Camp Senia	Mont.	10mi. W. Red Ldg.	2-8S-18E	7870	Custer		21.2	16.0	19.0	4.4
3	Canyon	Wyo.	8mi. N. Canyon Jct.	44.7N110.5W	7750	Yel. Nat. P.		31.6	34.0	27.5	7.6
	Cooke City	Mont.	Cooke City	25-9S-14E	7400	Absaroka		24.3	19.0	17.6	6.5
	Crevice Mtn. #1	"	6mi. E. Gardiner	26-9S-9E	8400	Yel. Nat. P.		32.5	30.0	24.0	9.1
	Crevice Mtn. #2	"	7mi. E. "	25-9S-9E	8200	"		32.4	30.0	22.7	8.9
7	Lake Camp	Wyo.	3mi. NE. Fishing Br.	44.6N110.4W	7850	"		27.2	29.0	25.6	7.1
	Porcupine	Mont.	12mi. NE. Wilsall	10-4N-10E	6500	Absaroka		15.7	14.0	8.0	3.7
	Hell's Canyon	"	26mi. SE. Livingston	23-5S-12E	6000	"		30.0	--	0.0	0.0
	Independence	"	26mi. NE. Gardiner	22-7S-12E	8000	"		38.5	--	38.5	10.5
				Average for		Drainage		26.4	23.3	22.3	7.1

*Adjacent Drainage



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No.				Locality	Descrip- tion			Av.	1940	1941	Avg.	1940	1941	Content
								In.	In.	In.	In.	In.	In.	In.
SHOSHONE RIVER														
32	Sylvan Pass	Middle Cr.	Wyo.	Sylvan Pass	12-52N-110W	7100	Yel. Nat. P.	40.1	31.5	31.6	11.8	11.3	9.2	
33	Up. Hardpan Basin	Hardpan Cr.	"	27 mi. SW. Cody	25-51N-106W	9500	Shoshone	37.6	27.5	41.4	8.0	7.2	6.4	
50	Brooks Lake #3*	Shoshone R.	"	Brooks Lake	23-44N-110W	9200	Washakie	57.9	44.5	54.9	17.2	14.2	16.3	
	Brooks Lake #1*	"	"	"	25-44N-110W	9000	"	70.8	54.0	60.0	23.4	15.7	17.8	
					Average	for Drainage		51.6	39.4	47.0	15.1	12.1	12.4	
BIGHORN RIVER														
	Brooks Lake #1	Wind River	Wyo.	Brooks Lake	25-44N-110W	9000	Washakie	70.8	54.0	60.0	23.4	15.7	17.8	
12	Togwotee Pass	Wind River	"	Togwotee Pass	29-44N-110W	9600	Teton	72.7	55.0	62.0	24.9	16.9	20.8	
13	Tensleep R.S.	Tensleep Cr.	"	15 mi. NE. Tensleep	30-49N-86W	8300	Bighorn	28.4	20.7	24.7	6.6	7.9	4.3	
16	Ranger Creek	Ranger Creek	"	14 mi. E. Shell	32-53N-88W	8800	"	32.1	20.4	22.7	6.7	5.4	3.8	
14	Dome Lake*	Shell Cr.	"	Dome Lake	11-53N-87W	8800	Bighorn	20.6	19.0	22.2	5.6	7.0	4.3	
45	Sawmill Glade	Popo Agie R.	"	13 mi. SW. Lander	3-31N-101W	8500	Washakie	20.2	12.4	27.9	4.4	4.1	4.8	
46	Blue Ridge	"	"	15 mi. " "	23-31N-101W	9500	"	25.0	16.7	33.4	6.2	5.4	6.9	
47	South Pass	"	"	19 mi. " "	13-30N-101W	9000	"	32.9	28.3	37.5	8.2	7.7	8.6	
48	Wood River	L. Popo Agie R.	"	42 mi. SW. Cody	28-46N-103W	8000	Shoshone	--	8.7	--	--	2.2	--	
49	Sheridan Cr. R.W. #2	Sheridan Cr.	"	16 mi. NW. Dubois	3-42N-109W	7500	Washakie	20.8	8.7	20.4	5.2	2.8	6.0	
50	Brooks Lake #3	Wind River	"	Brooks Lake	23-44N-110W	9200	"	57.9	44.5	54.9	17.2	14.2	16.3	
51	St. Lawrence R.S.	St. Lawrence Cr.	"	27 mi. NW. Lander	26-1N-4W	9000	Shos. I. R.	31.2	--	31.2	6.7	--	6.7	
52	Mosquito Park R.S.	Trout Creek	"	18 mi. " "	23-28-3W	9500	"	--	--	--	--	--	--	
53	DuNoir	Wind River	"	9 mi. NW. Dubois	27-42N-108W	8750	Washakie	28.4	--	28.4	7.3	--	7.3	
54	T-Cross Ranch	Horse Creek	"	12 mi. N. Dubois	1-43N-107W	8000	"	16.0	--	16.0	3.8	--	3.8	
					Average	for Drainage		38.1	28.0	36.6	10.8	8.7	9.4	
TONGUE RIVER														
14	Dome Lake	Goose Cr.	Wyo.	Dome Lake	11-53N-87W	8800	Bighorn	20.6	19.0	22.2	5.6	7.0	4.3	
17	Big Goose Cr. R.S.	E. Goose Cr.	"	20 mi. SW. Sheridan	4-53N-86W	7700	"	14.1	8.3	11.4	3.3	2.6	3.4	
					Average	for Drainage		17.4	13.6	16.8	4.4	4.8	3.8	
POWDER RIVER														
30	Red Fork	Middle Fork	Wyo.	23 mi. W. Kaycee	18-43N-85W	7500	Off Forest	24.1	11.8	22.3	5.7	3.4	5.1	
31	Sour Dough	Sour Dough Cr.	"	10 mi. W. Klondike	17-49N-84W	8500	Bighorn	22.4	17.7	24.1	4.0	3.2	3.7	
					Average	for Drainage		23.2	14.8	23.2	4.8	3.3	4.1	

*On adjacent drainage

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			Locality	Descrip- tion			Av. Snow Depth	Av. Water Content	1941	
							In.	In.	1940	1941
NORTH PLATTE RIVER										
1 Cameron Pass	Michigan Cr.	Colo.	Cameron Pass	2-6N-76W	10300	Roosevelt	63.6	51.6	50.6	17.5
7 Park View	Illinois Cr.	"	7mi. SE. Rand	24-5N-78W	9200	Routt	35.0	27.8	25.6	8.0
8 Columbine Lodge	Grizzly Cr.	"	Rbt. Ears Pass	21-5N-82W	9300	"	63.2	46.9	54.4	16.3
51 Big Creek Lake	Big Creek	"	5mi. SW. Pearl	9-11N-82W	9000	"	34.7	20.3	27.9	10.5
62 Willow Creek P.*	Illinois Cr.	"	Willow Cr. Pass	1-4N-78W	9500	Arapaho	43.7	38.7	34.1	10.2
7 Bottle Creek	Encampmt Cr.	Wyo.	7mi. SW. Encampmt	24-14N-85W	8200	Medicine Bow	44.1	30.2	27.1	8.8
8 Webber Spring	"	"	10mi. W.	27-14N-85W	9000	"	56.8	38.9	39.3	12.2
9 Old Battle	"	"	12mi. W.	29-14N-85W	9800	"	85.0	68.1	70.6	23.0
37 North French Cr.	N. French Cr.	"	Cent/Saratoga	27-16N-80W	10200	"	79.2	74.6	71.3	22.4
38 N. Barrett Cr. #2	Barrett Cr.	"	"	30-16N-80W	9400	"	61.7	56.7	52.4	15.8
39 Ryan Park #2	"	"	"	34-16N-81W	8400	"	38.3	28.8	29.7	8.1
				Average for Drainage			55.0	43.9	43.9	13.9
SWEETWATER RIVER										
29 Grannier Meadows	Rock Creek	Wyo.	20mi. SW. Lander	19-30N-100W	9000	Washakie	37.1	30.9	40.5	9.1
LARAMIE RIVER										
3 Brooklyn Lake	Nash Fork	Wyo.	7mi. NW. Centennial	11-16N-79W	10200	Medicine Bow	59.8	43.2	43.4	14.2
11 Fox Park	Fox Creek	"	Fox Park	21-13N-78W	9200	"	32.0	23.5	27.7	7.8
34 Pole Mountain #2*	Soldier Cr.	"	10mi. SE. Laramie	35-15N-72W	8700	"	13.2	11.9	10.8	3.0
35 Libby Lodge #2	Libby Creek	"	3mi. NW. Centennial	29-16N-78W	8700	"	26.5	18.8	21.7	5.6
36 Hairpin Turn #2	Nash Fork	"	5mi. NW.	24-16N-79W	9500	"	35.3	25.8	23.2	6.1
4 W. Port. G-P. Tunnel	Laramie R.	Colo.	4mi. N. Chambers L.	7-8N-75W	8600	Roosevelt	30.5	21.2	19.3	7.1
50 Deadman Hill*	Deadman Cr.	"	10mi. W. R. Feather	26-10N-75W	10200	"	43.8	34.9	32.0	9.1
71 Deadman Hill #2*	Deadman Cr.	"	8mi. SW.	6-9N-74W	10200	"	36.5	28.2	27.7	7.2
88 Roach	LaGarde Cr.	"	8mi. NW. Glendevey	5-10N-77W	9800	"	50.8	52.1	49.5	16.4
				Average for Drainage			36.5	28.8	28.4	8.5

*On adjacent drainage

MISSOURI AND ARKANSAS RIVER WATERSHEDS
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Issued April 10, 1941, at Fort Collins, Colo.

Main Drainage and No. Snow Course	Local Drainage	Location		Elev.	National Forest	Apr. 1 Snow Course Measurements					
		State	Locality			Descrip- tion	Av. Snow Depth		Av. Water Content		
							1940	1941	1940	1941	
SOUTH PLATTE RIVER											
14 Hoosier Pass	S. Platte R.	Colo.	Hoosier Pass	11400	Pike	42.5	21.9	40.5	11.8	6.3	10.3
15 Fairplay	" "	"	Fairplay	10000	"	3.3	0.0	7.2	0.6	0.0	1.8
83 Jefferson Cr. #2	Jefferson Cr.	"	5mi. NW. Jefferson	10100	"	14.7	21.2	27.2	3.4	6.0	6.6
			Average for Drainage			20.2	14.4	25.0	5.3	4.1	6.2
CROW CREEK											
34 Pole Mountain #2	Crow Creek	Wyo.	10mi. SE. Laramie	8700	Medicine Bow	13.2	11.9	10.8	4.1	3.5	3.0
POUDRE RIVER											
1 Cameron Pass	Joe Wright Cr.	Colo.	Cameron Pass	10300	Roosevelt	63.6	51.6	50.6	21.5	17.6	17.5
2 Chambers Lake	Poudre River	"	Chambers Lake	9000	"	22.3	21.5	16.2	7.6	7.8	5.5
3 Big South	" "	"	2mi. E. Chambers L.	8600	"	8.2	8.8	7.8	2.3	2.6	2.4
50 Deadman Hill	No. Poudre R.	"	10mi. W. R. Feather	10200	"	43.8	34.9	32.0	12.9	11.8	9.1
65 Lake Irene*	Big. S. Poudre	"	1mi. SW. Milner P.	10600	Ry. Mtn. N.P.	63.5	56.7	49.9	20.7	19.4	14.0
68 Hour Glass Lake	L. S. Poudre	"	2mi. NW. Pingree P.	9500	Roosevelt	25.5	22.8	19.8	6.8	6.7	4.2
71 Deadman Hill #2	N. Poudre R.	"	8mi. SW. R. Feather	10200	"	36.5	28.2	27.7	10.3	8.8	7.2
			Average for Drainage			37.6	32.1	29.1	11.7	10.9	8.6
BIG THOMPSON											
65 Lake Irene*	Big Thompson R.	Colo.	1mi. SW. Milner P.	10600	Ry. Mtn. N.P.	63.5	56.7	49.9	20.7	19.4	14.0
67 Fall River	Fall River	"	12mi. W. Estes P.	10600	" " "	--	57.0	--	--	16.2	--
95 Hidden Valley #2	Hidden Valley Cr.	Cr.	9mi. W. " "	10200	" " "	34.0	--	34.0	8.6	--	8.6
			Average for Drainage								
ST. VRAIN RIVER											
41 Wild Basin	N. St. Vrain R.	Colo.	5mi. W. Allens P.	10000	Ry. Mtn. N.P.	43.9	31.7	30.2	12.8	9.6	7.6
BOULDER CREEK											
5 E. Port. Moffat T.	S. Boulder Cr.	Colo.	East Portal	9400	Roosevelt	12.0	4.5	15.2	3.5	1.9	5.3
60 University Camp #2	N. Boulder Cr.	"	5mi. SW. Ward	10300	"	53.8	45.4	44.9	17.7	16.8	11.8
			Average for Drainage			32.9	25.0	30.0	10.6	9.4	8.6

*On adjacent drainage

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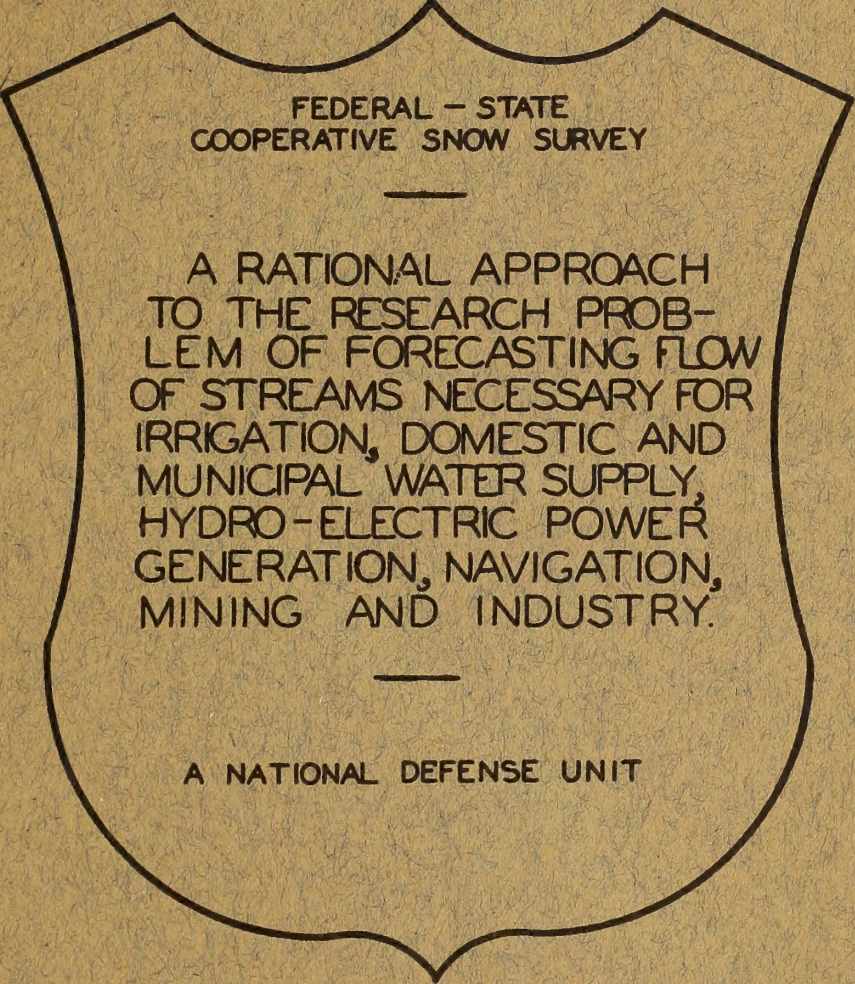
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Main Drainage and No. Snow Course	Local Drainage	State	Location		Elev.	National Forest	Apr. 1 Snow Course Measurements								
			Locality	Description			Avg.	1940	1941	Avg.	1940	1941			
CLEAR CREEK															
61 Loveland Pass #2	Clear Creek	Colo.	10 mi. W. Georgetown	27-4S-76W	10100	Arapaho		45.0	31.5	37.1	12.7	10.0	9.9		
ARKANSAS RIVER															
19 Tennessee Pass	Tennessee Cr.	Colo.	Tennessee Pass	21-8S-80W	10200	Cochetopa		36.1	19.3	33.1	8.9	5.2	8.9		
21 Twin Lakes Tun.	Lake Creek	"	9 mi. W. Twin Lakes	22-11S-82W	10500	"		37.8	22.7	32.3	9.8	7.2	9.8		
42 Marshall Creek*	Poncha Cr.	"	Marshall Pass	24-48N-6E	10800	"		46.9	32.7	53.6	14.1	10.8	15.8		
43 Poncha Creek	"	"	"	19-48N-7E	10500	"		37.8	30.0	51.1	11.7	10.2	15.4		
72 Whiskey Creek #2	Whiskey Cr.	"	Whiskey Cr. Pass	37-2N-05.2W	10300	Maxwell Gr.		29.2	13.7	39.0	8.3	5.2	11.7		
74 LaVeta Pass #2*	Cuchara Cr.	"	LaVeta Pass	22-28S-70W	9300	San Cristobal Gr.		26.2	15.5	41.5	7.9	5.5	13.0		
78 Four Mile Park #2	Lake Creek	"	3 mi. SW. Twin L.	23-11S-81W	9700	Cochetopa		8.9	2.4	14.6	2.4	0.7	4.7		
79 Fremont Pass #2	E. Fork Ark. R.	"	Fremont Pass	2-8S-79W	11400	Arapaho		51.4	41.7	52.6	16.3	11.4	14.0		
81 Blue Lakes #2	Cuchara Cr.	"	15 mi. SW. LaVeta	30-31S-69W	10000	San Isabel		23.8	17.1	40.8	6.8	6.0	11.0		
92 Monarch Pass	S. Fork Ark. R.	"	Monarch Pass	16-49N-6E	10500	Cochetopa		60.9	--	60.9	19.4	--	19.4		
			Average for Drainage				39.1	21.8	39.8	9.5	6.9	11.6			

*On adjacent drainage



FEDERAL - STATE
COOPERATIVE SNOW SURVEY

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